



**Maria Jacinta Rosario H. Romero, DDM, PhD**

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Education: 2012 – 2016: Doctor of Philosophy in Dental Science, Department of Cariology and Operative Dentistry, Division of Oral Health Sciences, Graduate School of Medical and Dental Sciences, Tokyo Medical and Dental University, Tokyo, Japan 2011 – 2012: Research student, Department of Cariology and Operative Dentistry, Division of Oral Health Sciences, Graduate School of Medical and Dental Sciences, Tokyo Medical and Dental University, Tokyo, Japan 2008 – 2009: Dental Extern, Hospital Dentistry Externship Program, University of the Philippines – Philippine General Hospital, Manila, Philippines 1998 – 2006: Doctor of Dental Medicine, University of the Philippines Manila College of Dentistry, Manila, Philippines 1994 – 1998: Secondary Education, Our Lady of Grace Academy (now Saint Mary's Academy of Caloocan), Caloocan City, Philippines

Professional Experience: Oct. 2017: Invited Undergraduate Research Panel member, Emilio Aguinaldo College School of Dentistry and Dental Technology July 2017: Participant, Centro Escolar University Representative, European Organisation for Caries Research (ORCA) Summer School with University of Malaya, Kuala Lumpur Malaysia May 2017: Judge, Philippine Dental Association Convention Undergraduate Research March 2017: Judge, Research Forum, Centro Escolar University School of Dentistry, Manila, Philippines 2017: Journal Reviewer, Archives of Oral Biology Nov. 2016 – present: Associate Professor, Centro Escolar University, Manila, Philippines 2016 : Associate Dentist, Private Dental Clinic, Cabanatuan City, Philippines 2016: Invited lecturer, University of the Philippines Manila College of Dentistry 2016: Invited member of the Experts Panel for Undergraduate Research, University of the Philippines Manila, College of Dentistry 2013: Undergraduate Pre-clinical Instructor, Tokyo Medical and Dental University 2009 – 2011: Associate Dentist, Private Dental Clinic, Manila, Philippines 2007 – 2008: Lecturer, Dental Board Orientation, Dental Licensure Exam Review, University of the Philippines Manila College of Dentistry 2007: Associate Dentist, Private Dental Clinic, Bulacan, Philippines 2007: Lecturer and Instructor, Nazarene Dental Review Center, Manila, Philippines Affiliations: · International Association for Dental Research (2013 – present) · European Organisation for Caries Research (ORCA) (2013 – present) · Japanese Association for Dental Research (2013 – 2016) · Japanese Society of Conservative Dentistry (2012-2015) · Philippine Dental Association (2007 – present) · Optical Society of America Tokyo Medical and Dental University Student Chapter (2013-2014) · University of the Philippines Dental Alumni Association

#### Conference Presentations:

1. Maria Jacinta Rosario H. Romero, Syozi Nakashima, Alireza Sadr, Toru Nikaido, Junji Tagami. In Vitro Dentin Remineralization with a Potential Salivary Phosphoprotein Analogue. (Oral presentation and scientific session chair) International Association for Dental Research General Session and Exhibition, March 11-14, 2015, Boston, MA, USA
2. Maria Jacinta Rosario H. Romero, Syozi Nakashima, Alireza Sadr, Toru Nikaido, Junji Tagami. Effect of Casein as a Model Pellicle Precursor Protein on In Vitro Dentin Remineralization. (Poster presentation) 6th International Summer Program, August 25-28, 2014, Tokyo Medical and Dental University, Tokyo, Japan
3. Maria Jacinta Rosario H. Romero, Syozi Nakashima, Alireza Sadr, Toru Nikaido, Junji Tagami. Effect of Casein as a Model Pellicle Precursor Protein on In Vitro Dentin Remineralization. (Oral and poster presentations) 61st ORCA (European Organisation for Caries Research) Congress, July 2-5, 2014, Greifswald, Germany
4. Maria Jacinta Rosario H. Romero, Syozi Nakashima, Toru Nikaido, Shizuko Ichinose, Alireza Sadr, Junji Tagami. Hydroxyapatite Growth Inhibition by Casein, a Salivary Phosphoprotein Analogue.  
(Oral presentation) International Association for Dental Research – Asia Pacific Region (IADR-APR) Conference, August 21-23, 2013, Bangkok, Thailand
5. Maria Jacinta Rosario H. Romero, Syozi Nakashima, Toru Nikaido, Alireza Sadr, Junji Tagami. Effect of Casein as a Model of Salivary Protein on Hydroxyapatite Growth In Vitro. (Oral presentation) Japanese Society of Conservative Dentistry Meeting, November 2012, Hiroshima, Japan
6. Diletta Forgione, Mohannad Nassar, Md. Sofiqul Islam, Maria Jacinta Rosario H. Romero, Riccardo Tonini, Noriko Hiraishi, Giovanni Cavalli, Junji Tagami. The Effect of Phytic Acid on the Bond Strength of Three Different Adhesives to Root Dentin. 17th Biennial ESE (European Society of Endodontology) Congress. September 16-19, 2015, Barcelona, Spain.
7. Zin Ei Thwe, Maria Jacinta Rosario H. Romero, Syozi Nakashima, Yasushi Shimada, Junji Tagami. Monitoring the Fluoride Release and Demineralization Inhibition Potential of Fissure Sealants in Simulated Salivary Solutions. Japanese Society of Conservative Dentistry Meeting, November 2015, Tokyo, Japan
8. Zin Ei Thwe, Maria Jacinta Rosario H. Romero, Syozi Nakashima, Yasushi Shimada, Junji Tagami. Monitoring the Fluoride Release of Pit and Fissure Sealants in Simulated Saliva Solutions. 7th International Summer Program, Tokyo Medical and Dental University, September 2015, Tokyo, Japan
9. Zin Ei Thwe, Maria Jacinta Rosario H. Romero, Yasushi Shimada, Syozi Nakashima, Yasunori Sumi, Junji Tagami. Anti-demineralization Potential of Fluoride-Releasing Sealants on Unsealed Enamel Surfaces. International Association for Dental Research – Asia Pacific Region (IADR-APR) General Session and Exhibition, June 22-25, 2016, Seoul, South Korea.

#### Publications:

1. Maria Jacinta Rosario H. Romero, Syozi Nakashima, Toru Nikaido, Shizuko Ichinose, Alireza Sadr, Junji Tagami. Inhibition of hydroxyapatite growth by casein, a potential salivary phosphoprotein homologue. *European Journal of Oral Sciences*. 2015, 123: 288-296.

2. Maria Jacinta Rosario H. Romero, Syozi Nakashima, Toru Nikaido, Alireza Sadr, Junji Tagami. In vitro dentine remineralization with a potential salivary phosphoprotein homologue. *Archives of Oral Biology*. 2016, 68: 35-42.
3. Maria Jacinta Rosario H. Romero, Syozi Nakashima, Alireza Sadr, Toru Nikaido, Junji Tagami. Effect of Casein as Model Pellicle Precursor Protein on In Vitro Dentin Remineralization. (Abstract). *Caries Research*. 2014, 48: 403.
4. Baba Bista, Syozi Nakashima, Toru Nikaido, Alireza Sadr, Tomohiro Takagaki, Maria Jacinta Rosario H. Romero, Takaaki Sato, Junji Tagami. Adsorption behavior of methacryloyloxydecyl dihydrogen phosphate on an apatite surface at neutral pH. *European Journal of Oral Sciences*. 2016, 124: 195-203.
5. Thwe Zin Ei, Yasushi Shimada, Syozi Nakashima, Maria Jacinta Rosario H. Romero, Yasunori Sumi, Junji Tagami. Comparison of resin-based and glass ionomer sealants with regard to fluoride-release and anti-demineralization efficacy on adjacent unsealed enamel. *Dental Materials Journal*. 2017, (in press)

### **Doctoral Thesis:**

Casein: A Potential Salivary Phosphoprotein Homologue for Tooth Mineral Regulation Modeling

Trainings attended: · Health Research Ethics and Good Clinical Practice Training Workshop, August 2017, University of the Philippines Manila – National Institutes of Health (UPM-NIH) with Forum for Ethical Review Committees in Asia and Western Pacific (FERCAP) · Seminar – Workshop, June 2017, Facebook Transfer and semi Adjustable Articulators, CEU School of Dentistry · Basic Training in Health Research Ethics Review and Training in the use of iREB Review Modules, May 2016, University of the Philippines Manila · Scanning Electron Microscopy – Energy Dispersive X-ray Analysis Training, March 2016, University of the Philippines Manila College of Dentistry · Micro-Computed Tomography Training, 2013, Instrumental Analysis Research Center, Tokyo Medical and Dental University · Scanning Electron Microscopy Training, 2012, Instrumental Analysis Research Center, Tokyo Medical and Dental University · Transmission Electron Microscopy Training, 2012, Instrumental Analysis Research Center, Tokyo Medical and Dental University

### **Other relevant activities:**

Seminar organizer, Modern Diagnostic Aids Towards an Optimized Dental Practice, May 2017, Cabanatuan City, Philippines · Attended various domestic and international scientific conferences as well as special lectures from world renowned researchers/ lecturers · Conducted several research discussions and laboratory demonstrations to visiting dentists, researchers and students from different parts of the world at the Department of Cariology, Tokyo Medical and Dental University · Representative of Tokyo Medical and Dental University at its booth during the International Association for Dental Research Asia Pacific Region Conference in Bangkok, Thailand (2013) · Presenter at the Optical Society of America Tokyo Medical and Dental University and Osaka University Student Chapters Meeting (2013) · Organizing committee member of the Optical Coherence Tomography International Symposium held at Tokyo Medical and Dental University (2014) · Participated in visits to the different research and development facilities of various dental companies as well as in research discussions and workshops with their research scientists (Japan: Kuraray-Noritake, Tokuyama, GC, Yoshida, Lion, Horiba; Germany: DMG) · Taught research methodologies to other PhD students

## **Awards and Scholarships:**

2017: Selected participant, European Organisation for Caries Research (ORCA) Summer School with University of Malaya, Kuala Lumpur, Malaysia · 2014: Best Poster Award, 6th International Summer Program, Tokyo Medical and Dental University · 2014: Travel Fellowship Recipient for the 61st European Organisation for Caries Research (ORCA) Congress, Greifswald, Germany · 2013: Exchange student, Re-inventing Japan Project, Inter-university Exchange Program Toward Medical and Dental Networking in Southeast Asia, Tokyo Medical and Dental University – Chulalongkorn University (Bangkok, Thailand) · 2012 – 2016 : Japanese Government (Monbukagakusho) Scholarship for PhD Course students · 2011 – 2012: Japanese Government (Monbukagakusho) Scholarship for Research students · 2007: 1st Place, Philippine Dental Licensure Exam, Philippine Regulation Commission, Manila, Philippines

## **Evolving Cariology Paradigms, Non-Operative Strategies and the use of Silver Diamine Fluoride**

**Maria Jacinta Rosario H. Romero, DDM, PhD**

Dental caries remains to be an international pandemic. The Global Burden of Disease Study 2015 has reported caries as the most prevalent non-communicable disease worldwide. Oral health organizations have called for changes in caries detection, for it to be done from an early non-cavitated stage, risk assessment and management in order to control this preventable disease. While there are many caries classification systems available, the International Caries Detection and Assessment System and its International Caries Classification and Management System (ICDAS/ ICCMS™) has been suggested to be the most comprehensive evidence-based system developed for such purpose. The need to shift the focus of dental caries management from restorative towards arrest and preventive strategies as well as a stronger integration into general health have also been emphasized. Over the years, numerous anticariogenic agents have been introduced. Silver diamine fluoride is one that has already been used in Japan for over eighty years. However, it was only until recently that it has gained international attention for its strong anticariogenic potential. The U.S. FDA in 2014 approved its use for dentin hypersensitivity. While in 2016, it became the first dental product to receive the FDA Breakthrough Therapy Designation for the arrest of dental caries. This presentation will provide an update on the current concepts in Cariology that would hopefully lead to a better understanding of dental caries both as the lesion and as the disease. Moreover, it will present various established and novel preventive and non-operative treatment strategies including different aspects of the clinical use of silver diamine fluoride and its mechanism of action.